

Serial No. 10/761,124

Docket No.: NOS-102

**REMARKS**

Applicants' undersigned attorney thanks the Examiner for the Examiner's comments. Applicants respectfully request reconsideration of this patent application, particularly in view of the above Amendment and the following remarks. Currently, Claims 1-35 are pending, with Claims 1-23 and 35 withdrawn from consideration.

**Amendments to the Claims**

Claims 24-34 have been examined with no claims being allowed.

Claim 24 has been amended to clarify that the insulating layer is directly arranged on at least one predetermined sealing area of at least one separator of the fuel cell, as illustrated in Figure 1. Claim 24 has been further amended to include the limitation of the sealing layer comprising a scaling material in the form of a paste or a solubilized foil. Support for this limitation is provided, for example, at page 12, lines 11-13. Claim 24 has also been amended to clarify that "the separator" in line 10 is "the at least one separator" for which an antecedent basis is provided in line 5.

No new matter has been added by this Amendment. No additional fee is required because the number of independent claims remains unchanged and the total number of claims also remains unchanged.

**Claim Rejections - 35 U.S.C. §112**

The rejection of Claims 24-34 under 35 U.S.C. §112, second paragraph, as being indefinite is respectfully traversed.

As indicated above, Applicants have amended Claim 24 to clarify that "the separator" in line 10 is "the at least one separator" recited in line 5. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

**Claim Rejection - 35 U.S.C. §102**

The rejection of Claims 24, 29, 31, and 34 under 35 U.S.C. §102(b) as being anticipated by Sato et al. (U.S. Patent No. 4,937,152) is respectfully traversed.

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For a reference to anticipate a claim, the reference must disclose each and every element or limitation of the claim. Sato et al. fail to disclose each and every element or limitation of amended Claim 24.

Applicants' amended Claim 24 recites applying the insulating layer directly onto a sealing area of at least one of the separators. In contrast, Figure 1 of Sato et al. discloses the electrolyte layer (41) which is interpreted in the Office Action as the insulating layer being arranged in the middle between two electrode layers (42, 43) and is nowhere in contact with one of the separators (interconnectors 46).

Applicants' amended Claim 24 further recites the sealing layer comprising a sealing material in the form of a paste or a solubilized foil, which further distinguishes Applicants' claimed invention from the Sato et al. reference. In particular, in the embodiment illustrated in Figure 2c of Sato et al., the Office Action interprets the spacer 10 as the sealing layer. However, the spacer 10 is a pre-manufactured, inflexible body having integrated fluid gas and oxide gas. The solid body of the spacer 10 is not comparable to or interchangeable with the paste or the solubilized foil of Applicants' claimed invention.

Claims 29, 31, and 34 depend either directly or indirectly from Claim 24 and, therefore, are patentable for at least the same reasons as Claim 24.

For at least the reasons given above, Applicants respectfully submit that the teachings of Sato et al. fail to disclose Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

#### **Claim Rejection - 35 U.S.C. §103**

##### **A. Sato et al.**

The rejection of Claims 25-27, 28, 32, and 33 under 35 U.S.C. §103(a) as being unpatentable over Sato et al. is respectfully traversed.

As explained above, the Sato et al. reference fails to disclose the method for producing a multi-layered sealing structure as recited in Applicants' amended Claim 24. Furthermore, there is no suggestion or motivation to modify the fuel cell in Sato et al. to achieve Applicants' claimed method of producing a multi-layered sealing structure.

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For example, Applicants' amended Claim 24 recites applying the insulating layer directly onto a sealing area of at least one of the separators. As shown in Figure 1 of Sato et al., the electrolyte layer (41), which is interpreted in the Office Action as the insulating layer being arranged in the middle between two electrode layers (42, 43), is nowhere in contact with one of the separators (interconnectors 46). Furthermore, there is no suggestion or motivation either in the Sato et al. reference or apparent to one skilled in the art to rearrange the layers in Sato et al. in order to achieve an insulating layer that is applied directly onto a sealing area of a separator. Rearrangement of the electrolyte layer and the separators to conform to Applicants' claimed sealing structure without further design modifications is not contemplated in Sato et al. and, further, would render the fuel cell unsatisfactory for its intended purpose. Additionally, because the structure of the fuel cell in Sato et al. differs from the structure resulting from Applicants' claimed method, the fuel cell in Sato et al. is not inherently derived from Applicants' claimed method.

As also explained above, the solid body of the spacer 10 in Sato et al. is not comparable to nor interchangeable with the paste or the solubilized foil of Applicants' claimed invention. Furthermore, there is no suggestion or motivation either in the Sato et al. reference or apparent to one skilled in the art to use the solid body spacer 10 and the paste or solubilized foil interchangeably. If a paste or solubilized foil were used in place of the solid body spacer 10 in Sato et al., this modification would render the fuel cell unsatisfactory for its intended purpose.

Thus, Applicants respectfully submit that the teachings of Sato et al. fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**B. Sato et al. in view of Arima**

The rejection of Claims 24-29 and 31-34 under 35 U.S.C. §103(a) as being unpatentable over Sato et al. in view of JP 63-285873 (hereinafter "Arima") is respectfully traversed.

From the Abstract and Figures in Arima, it appears that the gas inlets (1a) and the gas outlets (1b) are integrated in a ceramic plate (5), which appears to be connected with the electrolyte plate (1). Neither from the Abstract nor from the

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Figures does the invention of Arima appear to be clearly disclosed in terms of whether the electrolyte itself extends into the area of the gas inlets (1a) and the gas outlets (1b). The Office Action does not cite a specific passage in this document. Therefore, it seems to be merely an assumption that the subject matter of Applicants' Claim 24 is obvious over Sato et al. in view of Arima. Applicants respectfully request reference to a specific disclosure in Arima clearly showing from where to where the electrolyte layer extends.

Based on the vague description in Arima, there is no suggestion or motivation in Arima to overcome the deficiencies of Sato et al. explained above. Thus, Applicants respectfully submit that the teachings of Sato et al. in view of Arima fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**C. Sato et al. in view of Arima in view of Giller et al.**

The rejection of Claim 30 under 35 U.S.C. §103(a) as being unpatentable over Sato et al. in view of Arima, as applied to Claim 24, in view of Giller et al. (U.S. Patent No. 5,603,875) is respectfully traversed.

As explained above, the Sato et al. reference either alone or in combination with the Arima reference fails to disclose or suggest the method for producing a multi-layered sealing structure as recited in Applicants' amended Claim 24. Furthermore, there is no suggestion or motivation to modify the fuel cell in Sato et al. to achieve Applicants' claimed method of producing a multi-layered sealing structure.

For example, there is no suggestion or motivation either in the Sato et al. reference, the Arima reference, or apparent to one skilled in the art to rearrange the layers in Sato et al. in order to achieve an insulating layer that is applied directly onto a sealing area of a separator.

As another example, there is no suggestion or motivation either in the Sato et al. reference, the Arima reference, or apparent to one skilled in the art to use the solid body spacer 10 and the paste or solubilized foil interchangeably.

The Giller et al. reference fails to overcome the deficiencies of Sato et al. in view of Arima. Thus, Applicants respectfully submit that the teachings of Sato et al. in view of Arima in view of Giller et al. fail to disclose or suggest Applicants'

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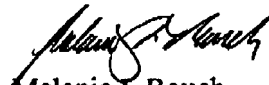
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claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

### Conclusion

Applicants believe that this case is now in condition for allowance. If the Examiner feels that any issues remain, then Applicants' undersigned attorney would like to discuss the case with the Examiner. The undersigned can be reached at (847) 490-1400.

Respectfully submitted,



Melanie I. Rauch  
Registration No. 40,924

Pauley Petersen & Erickson  
2800 West Higgins Road, Suite 365  
Hoffman Estates, Illinois 60169  
(847) 490-1400  
FAX (847) 490-1403